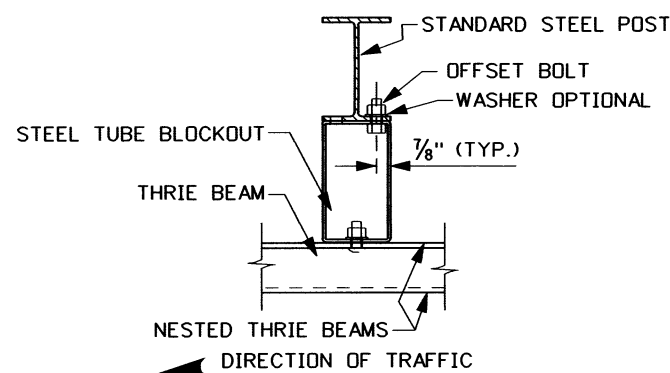


### SPECIFICATION NOTES

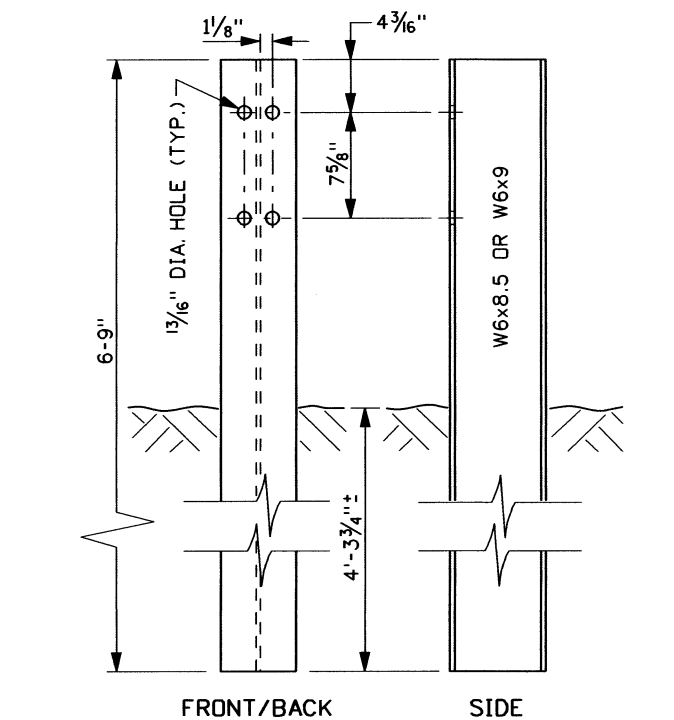
1. ALL STEEL SHALL CONFORM TO ASTM A 36.
2. FLAT PLATE PANELS ARE  $\frac{3}{16}$ " THICK.
3. STIFFENERS ARE  $\frac{1}{4}$ " PLATE STEEL.
4. ALL HOLE DIAMETERS ARE 1".
5. WELD COMPONENTS WITH E60 WELDING ROD.
6. GALVANIZE.

## WELDING INSTRUCTIONS

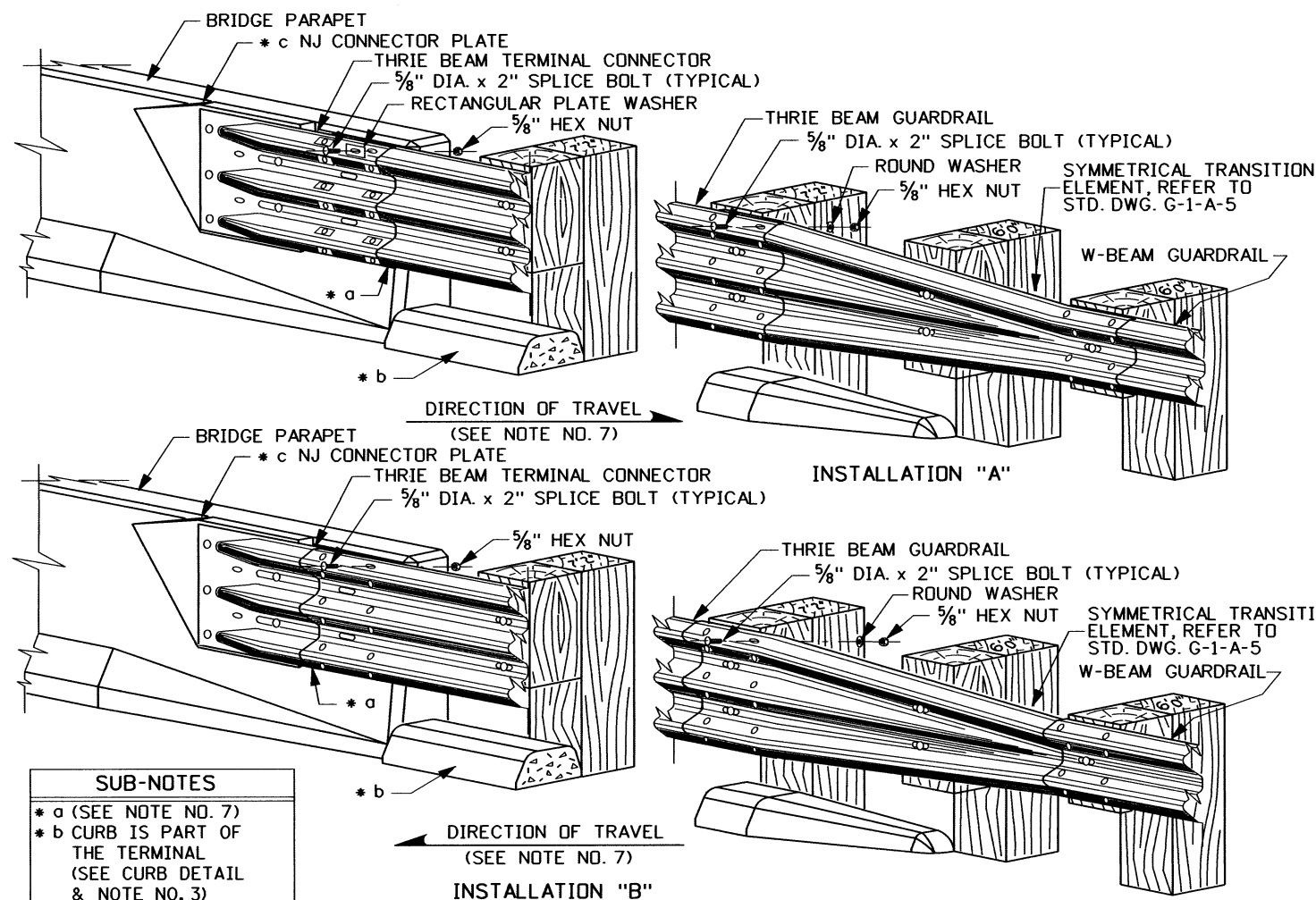
- (I) STIFFENERS LOCATED ON THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:  $\frac{3}{16}$ " CONTINUOUS BACK WELD ON EXTERNAL SIDES AND  $\frac{3}{16}$ " FILLET WELD BY 1" LONG SPACE AT 2" ON INTERNAL SIDES.
- (II) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:  $\frac{3}{16}$ " FILLET WELD BY 1" LONG SPACED AT 2".
- (III) RECTANGULAR AND TRIANGULAR COVER PLATES SHALL BE WELDED TOGETHER WITH A  $\frac{3}{16}$ " CONTINUOUS BACK WELD ON BOTH SIDES.



TYPE 3 STEEL TUBE BOLTING DETAIL  
(SEE NOTE NOS. 10 & 11)



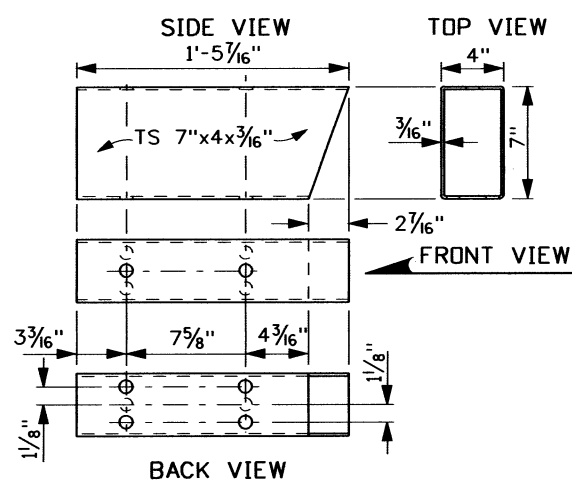
THRIE BEAM TUBE BLOCKOUT STEEL POST  
NCHRP 350, TL-3



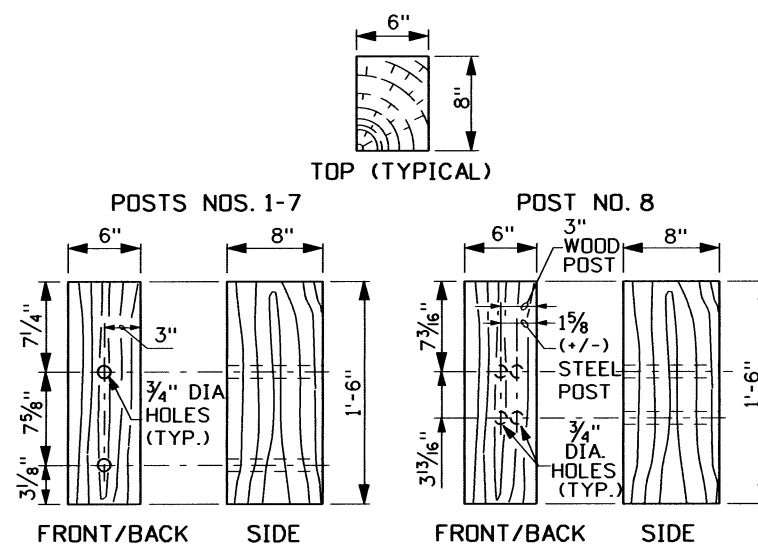
## SUB-NOTES

- \* a (SEE NOTE NO. 7)
- \* b CURB IS PART OF THE TERMINAL (SEE CURB DETAIL & NOTE NO. 3)
- \* c THE NJ CONN. PLATE IS FOR SLANTED PARAPET FACES ONLY

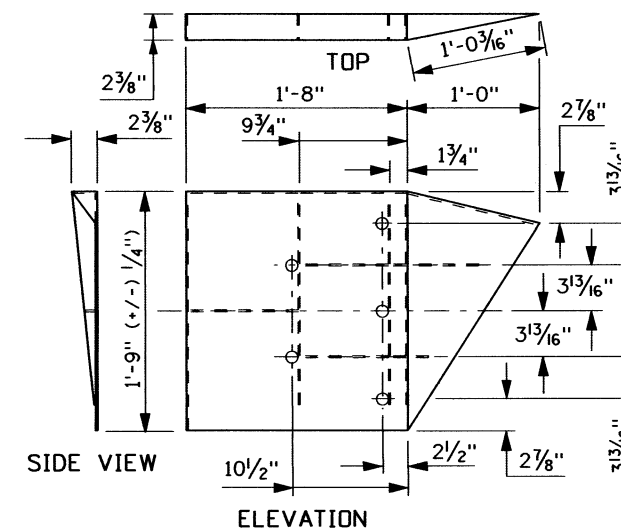
### THREE BEAM TO W-BEAM INSTALLATION (WOOD POST INSTALLATION SHOWN)



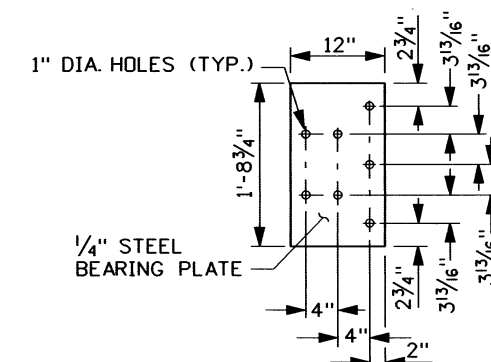
### TYPE 3 STEEL TUBE BLOCKOUT



### TYPE 3 WOOD BLOCKOUT DETAILS



NEW JERSEY CONNECTOR PLATE  
(TO BE PLACED ON INSIDE PARAPET FACE ONLY)



THRIE BEAM CONNECTOR PLATE  
ITEM NO. FPB07

## NOTES

1. THIS DRAWING REQUIRES STANDARD DRAWINGS G-1-A-1 THROUGH G-1-A-5 AND IS SUBJECT TO THE W-BEAM GUARDRAIL AND THRIE BEAM INSTALLATION REQUIREMENTS AND HARDWARE/ACCESSORY SPECIFICATIONS.
2. ALL THRIE BEAM BARRIER RAIL AND ACCESSORIES SHALL CONFORM TO THE SPECIFICATIONS CONTAINED WITHIN THE "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE".
3. TYPE 3 TERMINALS REQUIRE THE INSTALLATION OF CURB SECTION 10 AT THE BASE AND ALONG THE FACE OF POSTS NO. 1 THRU 7 (SEE STD. DWG. H-1 FOR CURB DETAILS).
4. ALL FIELD DRILLED WOODEN W-BEAM AND THRIE BEAM ACCESSORIES SHALL BE PAINTED WITH AN APPROVED PRESERVATIVE.
5. NO PUNCHING, DRILLING, CUTTING, OR WELDING WILL BE PERMITTED ON ANY METAL W-BEAM, THRIE BEAM OR GALVANIZED ACCESSORY.
6. THE TYPE 3 TERMINAL SHALL BE USED WITH PARAPETS DETAILED ON STANDARD DRAWINGS G-2-C, G-2-D, AND BRIDGE DRAWING TYPE IV STANDARD CONCRETE PARAPET WITH THRIE BEAM GUARDRAIL. REFER TO STANDARD DRAWINGS G-2-C AND G-2-D FOR CONCRETE TRANSITION BARRIER OR CONCRETE TRANSITION PARAPET BARRIER.
7. WHEN ATTACHING THRIE BEAM AND W-BEAM RAIL TO THE SYMMETRICAL TRANSITION ELEMENT LAPP THE RAIL IN THE DIRECTION OF THE NEAREST TRAFFIC LANE TO PREVENT SNAGGING.
8. FIELD WARPING THE THRIE BEAM END TO THE SLOPED FACE OF THE CONCRETE PARAPET IS NOT ALLOWED. THE NEW JERSEY CONNECTOR PLATE WITH THRIE BEAM CONNECTOR PLATE SHALL BE USED.
9. ALL THRIE BEAM GUARDRAIL POSTS NOS. 1-7 SHALL BE EITHER WOOD WITH WOOD BLOCKOUTS OR STEEL WITH STEEL TUBE BLOCKOUTS, POST NO. 8 SHALL BE WOOD OR STEEL WITH MODIFIED WOOD BLOCKOUT.

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	4-93	MSM	6	5-02	MSM	11	4-06	MSM
2	6-96	MSM	7	9-03	MSM	12	11-06	MSM
3	7-00	MSM	8	11-03	MSM	13	5-07	MSM
4	10-00	MSM	9	6-04	MSM			
5	6-01	MSM	10	11-04	MSM			

SCALES SHOWN  
ARE FOR 11" X 17"  
PRINTS ONLY

CADD FILE NAME
gle_0507.std
DRWG. ORIG. DATE
JUNE, 1988

**IDAHO  
TRANSPORTATION  
DEPARTMENT**

BOISE IDAHO



*W. J. Thomas*  
ASSISTANT CHIEF ENGINEER (DEVELOPMENT)

*Steven C. Hutchinson*  
CHIEF ENGINEER

STANDARD DRAWING

### GUARDRAIL TERMINAL TYPE 3

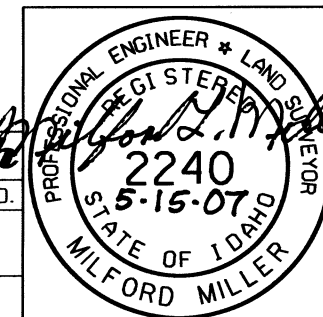
REQUIRES SHEET 2 OF 2 &  
STD. DWGS. G-1-A-1 THRU G-1-A-5 & H-1

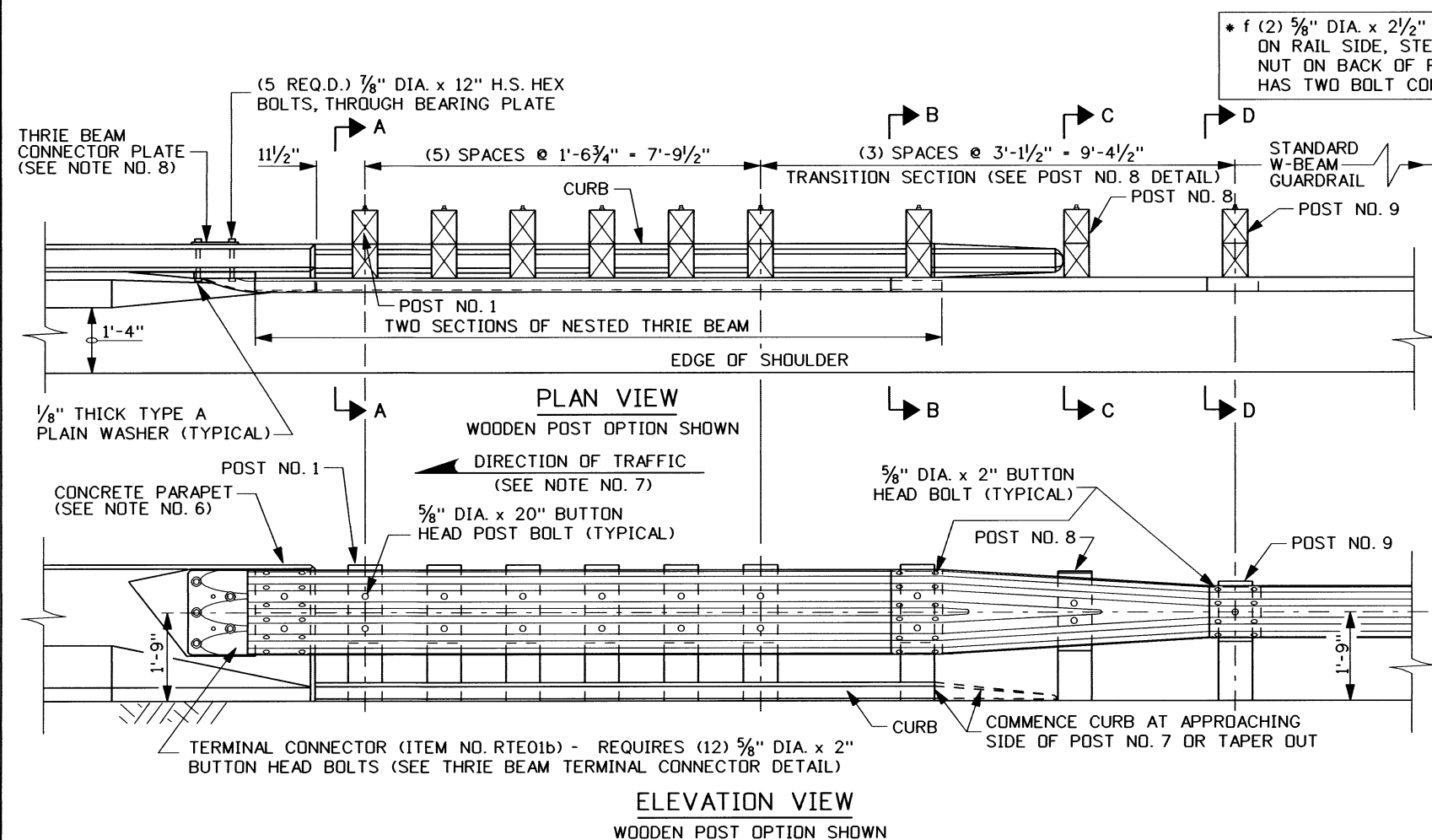
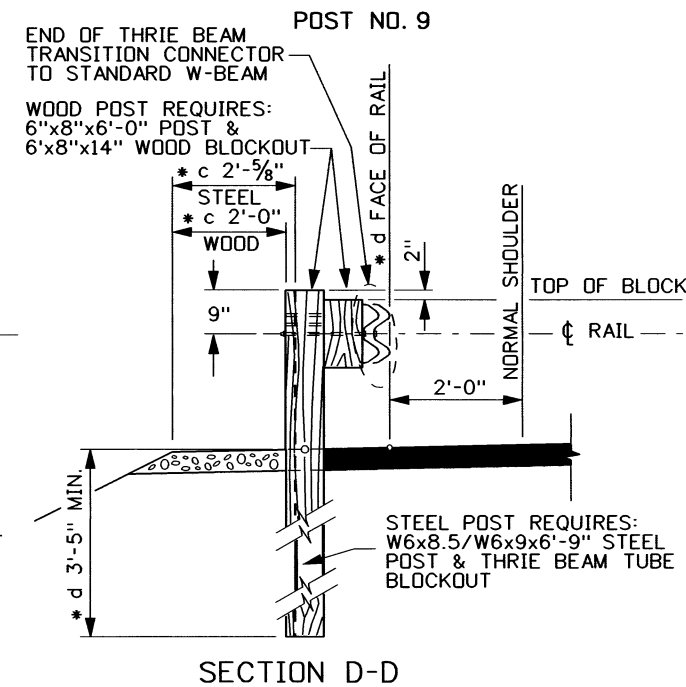
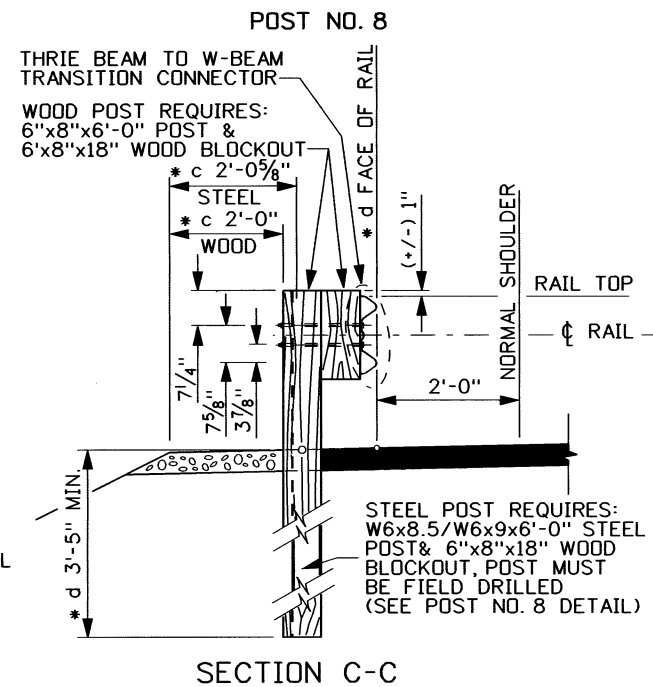
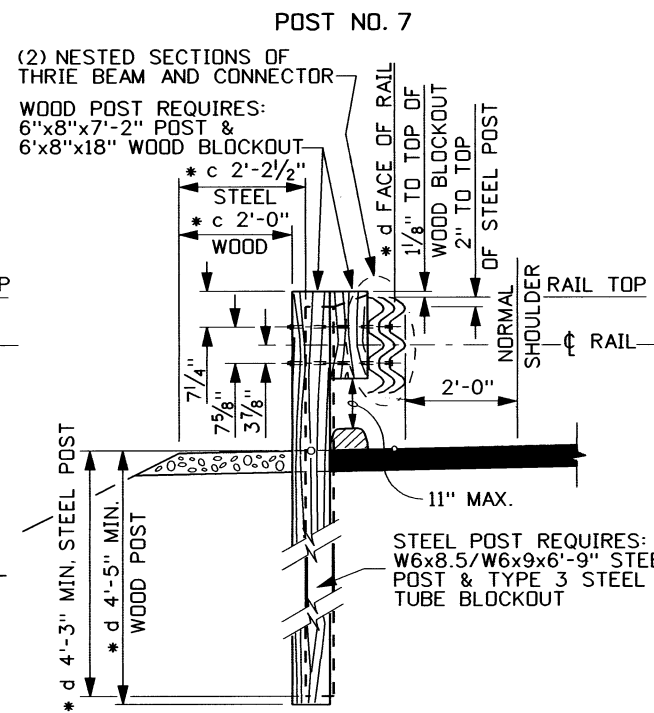
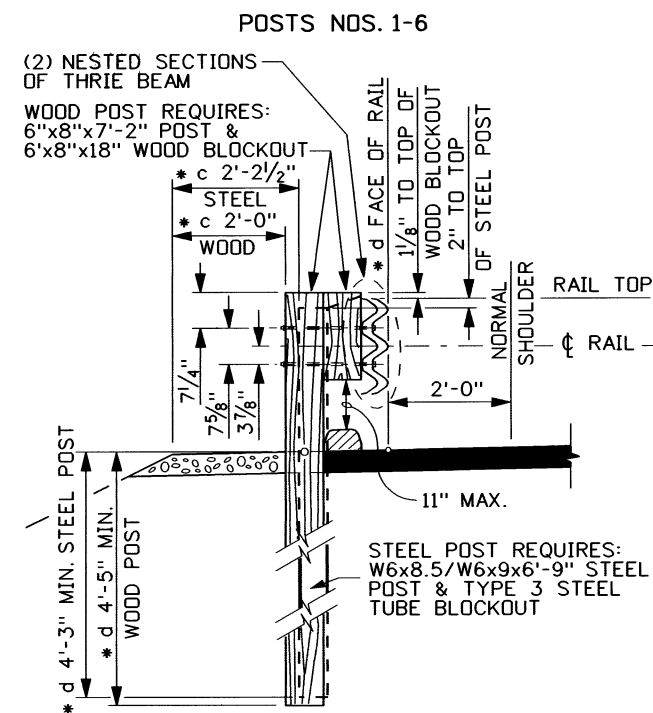
English

STANDARD DRWG. NO.

**G-1-E**

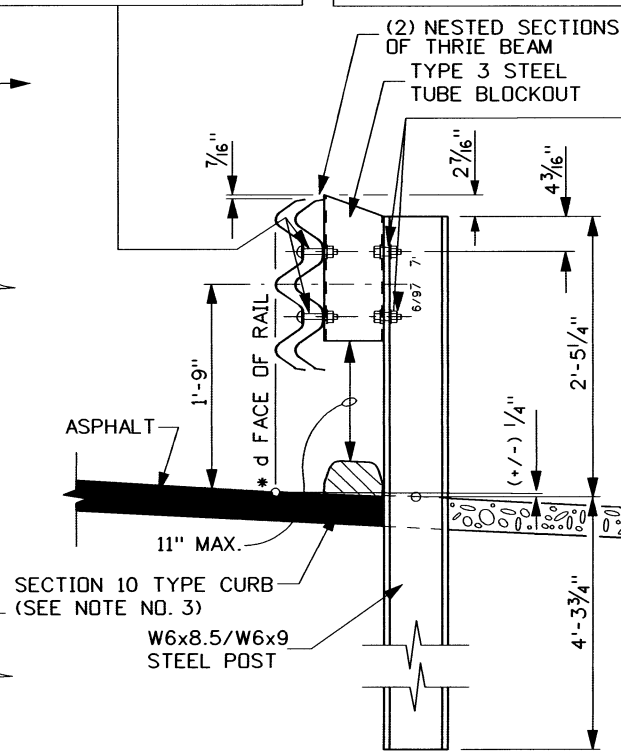
SHEET 1 OF 2





\* f (2) 5/8" DIA. x 2 1/2" BUTTON HEAD BOLT EACH ON RAIL SIDE, STEEL WASHER & HEAVY HEX NUT ON BACK OF POST FLANGE, EACH POST HAS TWO BOLT CONNECTIONS.

\* f (2) 5/8" DIA. x 1 1/2" HEX HEAD BOLT EACH ON RAIL SIDE, STEEL WASHER & HEAVY HEX NUT ON BACK OF POST FLANGE, EACH POST HAS TWO BOLT CONNECTIONS



- SUB-NOTES
- \* c A TYPE 3 TERMINAL REQUIRES THE TYPE A INSTALLATION ONLY (SEE STD. DWG. G-1-A-1).
  - \* d ALL RAIL, POST, & BLOCKOUT MEASUREMENTS ARE MADE ALONG THE "FACE OF RAIL" FROM THE ROADWAY SURFACE, EXCEPT THE POST DEPTH WHICH IS MEASURED FROM WHERE THE INSIDE FACE OF THE POST MEETS THE ROADWAY SURFACE PLANE.
  - \* e WHEN LINE POSTS CHANGE FROM WOOD TO STEEL OR STEEL TO WOOD THE POST SPACING MUST BE SHIFTED TO ALIGN WITH THE BOLT HOLES ON THE RAIL.
  - \* f RECTANGULAR WASHERS ONLY REQUIRED ON THE TERMINAL CONNECTOR INSTALLATION "A".

- NOTES CON'T.
- 10. THE BOLT(S) OF THE TYPE 3 STEEL TUBE BLOCKOUT SHALL BE PLACED ON THE APPROACHING TRAFFIC SIDE (SEE TYPE 3 STEEL TUBE BOLTING DETAIL).
  - 11. STEEL FOR TYPE 3 STEEL TUBE BLOCKOUT SHALL MEET ASTM A 500 GRADE B REQUIREMENTS.
  - 12. NOT TO SCALE.

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	4-93	MSM	6	5-02	MSM	11	4-06
2	6-96	MSM	7	9-03	MSM	12	11-06
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*P. Thomas*  
ASSISTANT CHIEF ENGINEER (DEVELOPMENT)

*Steven C. Sullivan*  
CHIEF ENGINEER

STANDARD DRAWING

GUARDRAIL TERMINAL TYPE 3

REQUIRES SHEET 1 OF 2 &  
STD. DWGS. G-1-A-1 THRU G-1-A-5 & H-1

English

STANDARD DRWG. NO.

G-1-E

SHEET 2 OF 2

